and Smith, 1949). The relationships of *Prasiola* remain altogether obscure.

Sacramento Junior College,
Sacramento, California.

Literature Cited

Dangeard, P. 1927. Recherches sur les Bangia et les Porphyra. Le Botaniste 18: 183–244.

Hillier, J., S. Mudd, and A. G. Smith. 1949. Internal structure and nuclei in cells of Escherichia coli as shown by improved electron microscopic techniques. Jour. Bact. 57: 319–338.

Ishikawa, M. 1921. Cytological studies on Porphyra tenera Kjellm. I. Bot. Mag. Tokyo 35: 206–218.

Kylin, H. 1930. Some physiological remarks on the relationship of the Bangiales. Bot. Notiser 1930: 417–420.

Lewis, I. F. and C. Zirkle. 1920. Cytology and systematic position of Porphyridium cruentum Naegeli. American Jour. Bot. 7: 333–340.

Robinow, C. F. 1942. A study of the nuclear apparatus in bacteria. Proc. Roy. Soc. Bot. 130: 299–324.

———. 1949. Cytological observations on bacteria. Proc. Sixth Internat. Congr. Exp. Cytol. 204–207.

Setchell, W. A. and N. L. Gardner. 1920. Phycological contributions I. Univ. California Publ. Bot. 7: 279–324.

Tulasne, R., and R. Vendrely. 1947. Demonstration of bacterial nuclei with ribonuclease. Nature 160: 225–226.

A NEW SPECIES OF BOUVARDIA (RUBIACEAE) FROM BAJA CALIFORNIA, MEXICO

Annetta Carter

During the past sixty or seventy years the flora of Baja California, Mexico, has become reasonably well known in the vicinity of anchorages along the Pacific Ocean and Gulf of California, in the mountains of the north and some of those of the Cape Region, and along "El Camino Nacional," as the main route of travel the length of the peninsula is now officially known. Whenever a botanist manages to get off the beaten track, however, he is quite apt to find plants of special interest. Arroyo del Salto, which empties into the Gulf east of La Paz near Las Cruces in the Cape Region, is such a place. Here, where a granite dike forms a dam across the upper reaches of the deep and narrow canyon, is an oasis of tall palms (*Erythea Brandegeei* Purpus) and an abundance of such moisture-loving herbaceous plants as *Samolus ebracteatus* H.B.K., *Bacopa Monnieri* (L.) Pennell, and *Cyperus*. On the drier talus slopes and cliffs, in addition to the usual *Lysiloma candida* Brandegee, *Jatropha cinerea* (Orteg.) Muell., *Cyrtocarpa edulis* (Brandegee) Standl., and *Fouquieria peninsularis* Nash, I found the *Bouvardia* described below as well as the

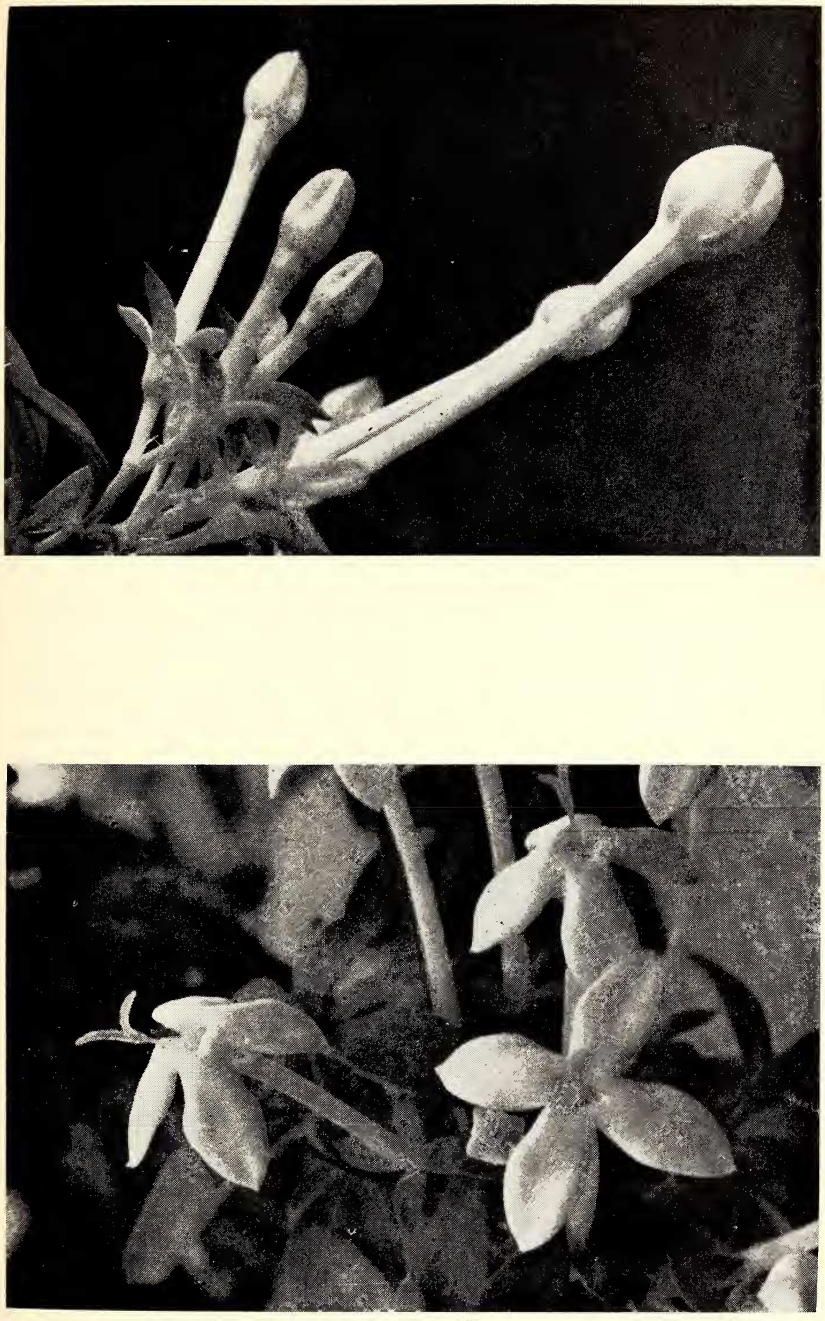

FIG. 1. Inflorescences of *Bouvardia Alexanderae:* upper, valvate buds; lower, from plant having flowers with styles exserted and stamens included. All × 2.

delicate annual, *Drymaria debilis* Brandegee, a species not previously reported from south of La Purísima (ca. latitude 26°N.), and *Dudleya nubigena* (Brandegee) Br. & Rose, known before only from the type locality in the Sierra de la Laguna.

Bouvardia Alexanderae sp. nov. Planta perennis lignosa scabrida foliis oppositis vel plerumque ternatis lineari-lanceolatis apice acutis 15–45 mm. longis 3–10 mm. latis floribus in cymis terminalibus 5–12-floris dispositis hypanthio obconico 2–3 mm. longo 3 mm. lato calycis lobis lanceolato-linearibus acutis crassis patentibus 4–5 mm. longis corolla hypocraterimorpha alba tubo gracili 2.5–3.5 cm. longo ejus lobis oblongis plus minusve acutis 8–10 mm. longis 4–5 mm. latis staminibus inclusis vel exsertis heterostylis stylo exili stigmate bifido 4–5 mm. longo ovario biloculari placentis peltatis crassis prope septi basem affixis ovulis numerosis ad perpendiculum dispositis capsula globosa fissura septo ad perpendiculum dehiscente seminibus exalatis angulatis diametro 1 mm. vel minoribus.

Type. Steep granite talus, Arroyo del Salto (latitude 24°12′N., long. 110°7.5′W.), east of La Paz, Baja California, Mexico, March 30, 1949, *Annetta Carter 2577* (UC 985926).

Woody perennial 3–6 dm. tall, stems terete, scaberulous, epidermis exfoliating on older parts, the internodes 10–25 mm. long; leaves 15–45 mm. long, 3–10 mm. wide, opposite, or occasionally in whorls of three, linear-lanceolate, acute at apex, sessile or gradually tapering to a short petiole, glabrous or slightly scaberulous on margins and midrib, the venation, except for the midrib, obscure; stipule sheath hyaline-membranous bearing several slender, hyaline teeth up to 2 (–3) mm. long; flowers in a terminal 5–12-flowered cyme on pedicels up to 1 cm. long, the pedicels with a hyaline, toothed scale at the base and occasionally below the hypanthium; hypanthium obconic, slightly quadrangular, 2–3 mm. long, 3 mm. broad, glabrous or slightly scaberulous; calyx lobes 4, lance-linear, acute, 4–5 mm. long, 1–1.5 mm. wide near base, 0.75–1 mm. thick, spreading, glabrous or slightly scaberulous, the sinus between the calyx lobes bearing one or two short hyaline teeth; flowers fragrant; corolla salverform, white (fading to pale rose) with a tint of rose dorsally on the midvein of the lobe, the tube slender, 2.5–3.5 cm. long, throat ca. 2 mm. in diameter, the lobes oblong, acutish, 8–10 mm. long, 4–5 mm. broad; stamens borne either at mouth of throat and exserted or at the base of the throat where they are included and nearly sessile, the filaments of the exserted stamens 1.5–2.5 mm. long; anthers 2–3 mm. long, versatile, yellow or black; heterostylic, style slender, stigma 4–5 mm. long, bifid; ovary inferior, two-celled, placenta swollen, peltate, attached near base of septum and bearing numerous crowded and vertically placed ovules; capsule globose, slightly two-lobed, 4 mm. broad and as high, dehiscing by an apical slit at right angles to the septum; seeds up to 1 mm. in diameter, angular, finely reticulate, wingless.

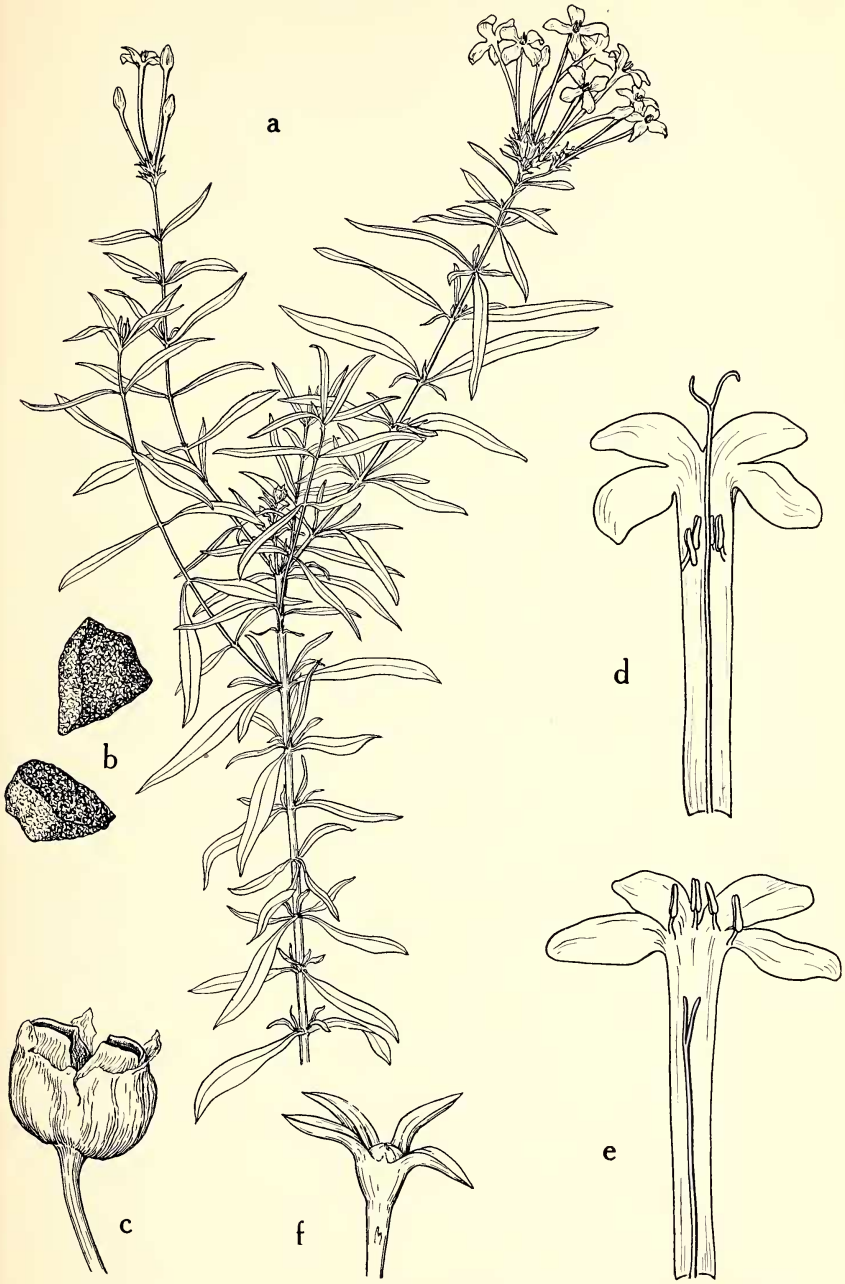

FIG. 2. *Bouvardia Alexanderae: a,* habit, × ½; *b,* seeds, × 15; *c,* dehisced capsule, × 5; *d* and *e,* corollas split longitudinally to show heterostyly, × 1½; *f,* calyx (showing thick spreading sepals with hyaline teeth in the sinuses), young capsule, and hyaline tooth on pedicel, × 2. Drawings by Emily Patterson Reid.

Because of its wingless seeds, *B. Alexanderae* keys to the genus *Houstonia* where it is not at all at home; in all other characters it fits into *Bouvardia,* where it falls in the section of the genus having large, white, salverform corollas with long tubes. Its 5–12-flowered compact cymes readily distinguish it from all of the closely related species: *B. induta* (Robinson) Standley, *B. Langlassei* Standley, *B. erecta* (DC.) Standley, *B. Karwinskyi* Standley, *B. glabra* Polak, *B. latifolia* Standley, and *B. longiflora* (Cav.) HBK. In addition, the linear-lanceolate leaves distinguish *B. Alexanderae* from all of its close relatives except *B. Karwinskyi* and *B. erecta.* Of these, *B. Karwinskyi* is described as a shrub 4–5 feet tall with long (15–26 mm.), linear calyx lobes and narrow, seemingly whorled leaves, while *B. erecta* is a divaricately, often rigidly branched, low shrub with 1–3-flowered cymes and winged seeds. *Bouvardia glabra* and *B. longiflora* also have winged seeds. This character has not been ascertained for the other above-mentioned species because of the lack of fruiting material.

No other species of *Bouvardia* are known to occur in Baja California, nor have the above-mentioned, closely related species been collected in the states of Sonora and Sinaloa on the opposite shore of the Gulf of California.

Bouvardia Alexanderae is named in memory of Miss Annie M. Alexander, who in 1947 invited me to accompany her and Miss Louise Kellogg on an expedition covering the length of the peninsula, thus initiating my field work of successive years in Baja California. She assisted generously in the financing of the 1949 trip during the course of which I collected this plant. In 1947 Miss Alexander, a keen and painstaking collector and an inspiring field companion, contributed her full share of work to the expedition and, although in her eightieth year, endured with cheerful equanimity the rigors of three months of rough travel and camping in the peninsula.

For the loan of herbarium specimens I wish to express my appreciation to the curators of the United States National Museum and the Chicago Natural History Museum. For fresh flowering material which served as a basis for the illustrations and certain details of the description, I am indebted to Mr. Frank F. Gander of Escondido, California, who, in his native plant nursery, grew plants from the seed that I provided. Mr. Gander (correspondence) reported that the plants bloomed profusely the first year, thrived in the hot, dry summer climate, withstood winter temperatures as low as 26°F., exhibited a tolerance to "hard" water, and did not seem to be attractive to rabbits. Because of its abundance of fragrant white flowers, its long blooming period, and its hardiness, *Bouvardia Alexanderae* may well prove to be a desirable garden plant in the Southwest.

Department of Botany,
University of California, Berkeley.